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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,656	12/11/2003	Simon C. Chu	RPS9 2003 0172 US1	2172
56102 7590 02/28/2007 IBM (RPS-BLF) c/o BIGGERS & OHANIAN, LLP P.O. BOX 1469 AUSTIN, TX 78767-1469			EXAMINER PATEL, NITIN C	
			ART UNIT 2116	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE 3 MONTHS		MAIL DATE 02/28/2007	DELIVERY MODE PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/733,656

Applicant(s)

CHU ET AL.

Examiner

Nitin C. Patel

Art Unit

2116

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date 12/11/03.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

1. This is in responsive to application communication filed on 11 December 2003.
2. Claims 1 – 20 are presented for the examination.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on 11 December 2003 was filed before the mailing date of the first office action. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Objections

4. Claims 2 – 11, and 13 – 20 are objected to because of the following informalities:
5. Claim 2, recites the limitation "TFTP" on lines 1 and 3, of page 10. The abbreviation of term "TFTP" is required or defined at least once in claim.
6. Claims 2 – 9, and 16 – 20 recites the limitation "IP" on page 10 – 13. The abbreviation of term "IP" is required or defined at least once in claim.
7. Claims 3 – 4, 7, 10, and 17 – 18 recites the limitation "DHCP" on page 10 – 13. The abbreviation of term "DHCP" is required or defined at least once in claim.
8. Claims 5, and 13 – 15, recites the limitation "PXE" on page 11 – 13. The abbreviation of term "PXE" is required or defined at least once in claim.
9. In the claim 9, replace "the unsuccessful" in line 5 on page 11 with ---an unsuccessful--- as unsuccessful has not previously recited in the claim.
10. Claim 9, recites the limitation "a remote client", "the client device", "the client, "the client system" in lines 1 – 9 on page 11. There is insufficient antecedent basis for this

Art Unit: 2116

limitation in the claim. Examiner has prosecuted the examination with considerations that it is referred to a remote client. If all of them are different than applicant is advised to provide an explanation on the relationship among them.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

11. Claims 9 – 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. Claim 9, recites the limitation “the client”, “the client system” in lines 5 – 9 on page 11. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1 – 4, 6 – 12, 16 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over King et al. [hereinafter as King], US Patent 7,181,604, and further in view Klimento, US Patent 5,974,547.

14. As to claims 1, 9, and 16, King teaches a method and a data processing system [computer system, fig. 1] suitable for use as a client device [blade 40] in a network [col.

Art Unit: 2116

10, lines 63 – 65], the system including a general purpose processor [CPU 520] and memory [Flash memory 516, SRAM 517, RAM 540] accessible to [as shown in fig 5] the general purpose processor [520], comprising: a service processor [360, fig. 3] communicatively coupled [via serial link 381] to the general purpose processor [520][fig. 3 and 5]; computer code means [boot code, col. 8, lines 39 -] for responding to a boot event by requesting boot information from a network device [col. 8, lines 39 – 45, 48 – 56]; computer code means [boot code] for determining that the boot information request expired unsuccessfully [timed-out expired, fig. 7] [col. 11, lines 63 – 67, col. 12, lines 1 – 10] and, responsive thereto, for requesting the boot information from the service processor [col. 12, lines 1 – 12]; computer code means for responding to the successful retrieval of the boot information from the service processor by using the retrieved boot information to establish a network connection to a file transfer server [DHCP server][col. 9, lines 54 – 67, col. 10, lines 16 – 62].

However, King does not explicitly teaches connection to file transfer server and computer code means for using the file transfer server connection to download an operating system image from the file transfer server and code means for booting the operating system image to install an operating system.

Klimento discloses a technique for reliable network booting of an operating system to a client PC [10, fig. 2A] including a file transfer server [236] [col. 7, lines 31 – 32] and computer code means [TFTP trivial file transfer protocol, RAFTP, random access trivial file transfer protocol] for using the file transfer server [236] connection to download an operating system image [56 hard disk image] from the file transfer server

Art Unit: 2116

[236] and code means for booting the operating system image [56] to install an operating system [col. 7, lines 11 – 67, and col. 8, lines 1 – 12, col. 9, lines 4 – 11, 35 – 67, col. 10, lines 1 – 67, col. 11 and 12, lines 1 – 67, fig. 3, 5, 7].

It would have been obvious to one of ordinary skill in art, having the teachings of King and Klimento before him at the time of invention was made, to modify/include the boot option information to contact DHCP server as disclosed by King to include a file transfer server [236] [col. 7, lines 31 – 32] and computer code means [TFTP trivial file transfer protocol, RAFTP, random access trivial file transfer protocol] for using the file transfer server [236] connection to download an operating system image [56 hard disk image] from the file transfer server [236] and code means for booting the operating system image [56] to install an operating system [col. 7, lines 11 – 67, and col. 8, lines 1 – 12, col. 9, lines 4 – 11, 35 – 67, col. 10, lines 1 – 67, col. 11 and 12, lines 1 – 67, fig. 4] as taught by Klimento in order to facilitate a reliable network booting of an operating system to a client [Title].

One of ordinary skill in the art wanted to be motivated to include a file transfer server and TFTP for using the file transfer server connection to download an operating system image from the file transfer server and code means for booting the operating system image to install an operating system to facilitate a reliable network booting of many different operating system to a client [title, col. 6, lines 9 – 11, and lines 37 – 40].

15. As to claim 2, Klimento the file transfer server is a TFTP compliant server and wherein the service processor includes storage containing boot information including an

IP address for the TFTP server and the path and name of an operating system image on the TFTP server [col. 7, lines 27 – 67].

16. As to claim 3, King teaches a DHCP server and the code means [boot code] for responding to the boot event includes code means for responding to the boot event by performing a DHCP broadcast to determine the presence on the network of a DHCP compliant server [col. 10, lines 54 – 67, col. 11, lines 1 – 10].

17. As to claim 4, King teaches a DHCP server including the code means for determining that the boot information request terminated unsuccessfully [timed-out expired] includes code means for receiving a network timeout message corresponding to the DHCP broadcast [col. 12, lines 6 – 9, steps 750 in fig. 7].

18. As to claim 6, King teaches a service processor [col. 7, lines 55 – 58, fig. 3] further a deployment server having access to a table containing the boot information [boot option information] and further configured to provide the boot information to the service processor [col. 9, table 1, col. 10, lines 16 - 22].

19. As to claim 7, King teaches to provide the boot information to the service processor in response to a timeout event following a DHCP broadcast by the system [fig. 7].

20. As to claim 8, King teaches DHCP server and the boot information table includes a list of IP [network] address [network address] assignable by the deployment server to the client [col. 9, lines 49 – 51, table 1].

21. As to claim 10, King teaches a DHCP server, wherein making the first attempt to obtain an IP address [network] comprises issuing a DHCP discover.

Art Unit: 2116

22. As to claims 11 – 12, Klimento the file transfer server is a TFTP compliant server and wherein the service processor includes storage containing boot information including an IP address for the TFTP server and the path and name of an operating system image on the TFTP server includes providing a path and name of files needed to boot the operating system [col. 7, lines 27 – 67].

23. As to claim 17, King teaches DHCP server and the boot information table includes a list of IP [network] address [network address] assignable by the deployment server to the client [col. 9, lines 49 – 51, table 1].

24. As to claim 18, King teaches to provide the boot information to the service processor in response to a timeout event following a DHCP broadcast by the system [fig. 7].

25. As to claims 19 – 20, King teaches a code means responsive to a request from client following a boot event to obtain an IP address [network] and file path [boot path] and name from a deployment server [col. 11, lines 1 – 30].

26. Claims 5, and 13 – 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over King et al. [hereinafter as King], US Patent 7,181,604, in view Klimento, US Patent 5,974,547 as applied to claims 1 – 4, 6 – 12, and 16 - 20 above, and further in view of Frye, Jr. [hereinafter as Frye], US patent application US 2003/0097553 A1.

27. As to claim 5, and 13 – 15 neither King nor Klimento teaches PXE compliant code means to provide PXE information, including IP address information, to the service processor.

However, Frye discloses PXE server and method of directing a computer network for booting using a prebooting execution environment [PXE] embedded based computer including providing PXE information including boot server name, IP address, boot file name [fig. 1B, 2][para 0012 on page 1 – 2, para 0019 – 0020 on page 2, para 0042 on page 4 – 5].

It would have been obvious to one of ordinary skill in art, having the teachings of King, Klimento and Frye before him at the time of invention was made, to modify/include network booting of an operating system to a client computer as disclosed by King, and Klimento to include PXE server and method of directing a computer network for booting using a prebooting execution environment [PXE] as taught by Frye in order to obtain PXE enabled target server of the network and in response provides a netboot program and address information of boot server and handle PXE requests without conflict with DHCP server [para 0011 – 0012 on page 1 – 2, and para 0013 on page 2].

One of ordinary skill in the art wanted to be motivated to include PXE server and method of directing a computer network for booting using a prebooting execution environment [PXE] provide multiple advantages as PXE server need not be provided on every subnet, an inexpensive appliance is provided on each subnet [para 0013 on page 2].

28. **Examiner's note:** Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant.

Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures

Art Unit: 2116

may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

29. **Prior Art not relied upon:** Please refer to the references listed in attached PTO-892, which, are not relied upon for claim rejection since these references are relevant to the claimed invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nitin C. Patel whose telephone number is 571-272-3675. The examiner can normally be reached on 6:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on 571-272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2116

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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